


DEPARTMENT OF
ECOLOGY
State of Washington

PREVENTION OF SIGNIFICANT DETERIORATION (PSD) PERMIT

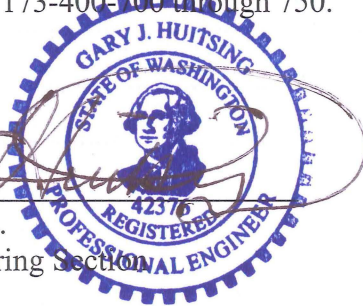
Issued To:	BP West Coast Products LLC BP Cherry Point Refinery
Facility Location:	4519 Grandview Road Blaine, Washington 98230
Permit Number:	Final PSD 16-01
Date of Permit Issuance:	May 23, 2017
Effective Date of Permit:	May 23, 2017

This PSD permit is issued under the authority of the Washington State Clean Air Act, Chapter 70.94 Revised Code of Washington; the Washington State Department of Ecology regulations for the Prevention of Significant Deterioration of Air Quality as set forth in Washington Administrative Code 173-400-700 through 750.

PREPARED BY:

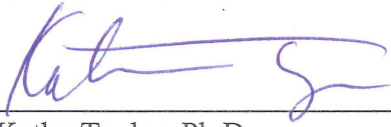


Gary J. Huitsing, P.E.
Science and Engineering Section
Air Quality Program



5/23/2017
Date

APPROVED BY:



Kathy Taylor, Ph.D.
Deputy Air Quality Program Manager
Washington Department of Ecology

5/23/17
Date

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PROJECT SUMMARY

BP West Coast Products LLC operates a refinery in Blaine, Washington, referred to as the BP Cherry Point Refinery. The BP Cherry Point Refinery (BP or refinery) produces petroleum based fuels.

This Prevention of Significant Deterioration (PSD) project referred to as the BP Coker Heaters – Replacement project (or project), will make the following changes to the refinery:

- Replace the two existing coker heaters, installed as part of the original facility in 1970, with two new coker heaters equipped with spalling (online cleaning capability).
- Install a lean oil absorption system in the coker off gas system.
- Install a compressor as part of the new lean oil absorption system.
- Install bypasses of existing heat exchangers in crude preheat system.

Changes not triggering New Source Review include:

- Replace the boiler feedwater circulation pump for the coker heaters.
- Change the main fractionator accumulator for additional sour water generation associated with online spalling capability.

Construction on this project is expected to begin sometime in 2017, and the new units are expected to start operating during the third quarter of 2019.

A PSD analysis for this project determined that it will have physical or operational changes that qualify as a major modification. Estimated project emissions are above the PSD significant emission rate (SER) thresholds both before and after considering significant net emission increases and/or decreases associated with this project for each of the following pollutants: combined emissions of nitrogen oxide and nitrogen dioxide (NO_x), carbon monoxide (CO), sulfur dioxide (SO₂), sulfuric acid mist (H₂SO₄), particulate matter (PM), PM less than 10 microns (PM₁₀), PM less than 2.5 microns (PM_{2.5}), volatile organic compounds (VOCs), and greenhouse gases (CO_{2e}).

A full technical review of the project for these pollutants, including a Best Available Control Technology (BACT) analysis, and the project's effect on national ambient air quality standards (NAAQS), PSD increments, visibility, soils, and vegetation, is required and included in a Technical Support Document (TSD) prepared by the Washington State Department of Ecology (Ecology).

The emissions of other air pollutants not subjected to PSD review are covered in the Northwest Clean Air Agency's (NWCAA) Notice of Construction (NOC) approval for this project.

APPROVAL CONDITIONS

Based on the PSD permit application submitted by BP on March 28, 2016, and the technical review performed by Ecology, Ecology finds that all requirements for issuance of this PSD permit have been satisfied. Ecology determined the application complete on April 28, 2016. Approval of the project is granted subject to the following conditions:

I. EFFECTIVE DATE OF PERMIT

In accordance with the Washington Administrative Code (WAC) 173-400-730(2)(c), the effective date of this PSD permit is one of the following dates:

- A. The date of issuance of this permit; or
- B. A later date if specified on the signature page of this permit.

II. PERMIT EXPIRATION

Pursuant to WAC 173-400-730(5), and unless an extension is granted by Ecology prior to expiration, BP's authorization to construct under this PSD permit expires as follows:

- A. This permit expires, and re-permitting will be required before any further construction activity may occur, if:
 - 1. Construction has not commenced (as defined in 40 CFR § 52.21 (b)(9)) within eighteen (18) months of the effective date of this permit; or
 - 2. Construction is discontinued for a period of eighteen (18) months or more; or
 - 3. Construction is not completed within a reasonable time.

III. PERMIT NOTIFICATION REQUIREMENTS

- A. BP's requirements in this PSD permit to notify, report to, or acquire approval or agreement from "Ecology and/or the NWCAA" may be satisfied by providing such notification, reporting, or approval request to NWCAA if the conditions of this PSD permit have been incorporated into BP's Title V Air Operating Permit issued pursuant to 40 CFR Part 70 and Chapter 173-401 WAC.
- B. BP must notify Ecology and NWCAA in writing or electronic mail of the date construction of the project is commenced, postmarked or received no later than thirty (30) days after such date.
- C. By March 1 of each year, BP must submit to Ecology, in writing or electronic mail, an annual report containing a brief summary of the construction activities

related to the project that occurred during the previous calendar year. This reporting obligation shall end when BP submits a notification to Ecology, in writing or electronic mail, that all construction activities related to the project have been completed. This notification of completion shall contain a brief summary of any construction activities related to the project that have not been included in a prior annual report.

IV. EQUIPMENT RESTRICTIONS

This PSD permit authorizes the construction of the new equipment associated with the coker heater replacement project, as listed in Table IV-1. However, BP may choose not to construct all of the listed equipment.

Table IV-1. New Equipment Associated with the Coker Heater Replacement Project	
Equipment Description	New or Modified
Coker Heater (West)	New
Coker Heater (East)	New
Lean Oil Absorption System	New
Compressor for lean oil absorption system	New
Crude Heat Exchanger Bypasses	New

V. EMISSION LIMITS

The following emission limits apply to each coker heater unless otherwise specified. These limits include consideration of BACT determinations described in Section VI. The operating modes described in these limits are defined as:

- Forced draft mode is when the forced draft fan is operating.
- Natural draft mode is when the forced draft fan is not operating.
- Normal operations mode is when hot residual oil at normal coking temperatures (900°F or higher) is sent to the coking drum to produce coke. Online cleaning is part of the normal operations mode.
- Standby mode occurs when circulating process materials to maintain unit temperatures when not producing coke from the heater.
- Startup mode is the period between when fuel gas is introduced to the heater burners to heat process materials for coking and ends when process material leaving the heater reaches normal coking temperatures (900°F).
- Pre-startup activities include equipment preparation and verification activities following maintenance events (e.g., curing refractory, general mechanical

checkout of equipment, instrument system review, pressure testing, and purging equipment).

- Shutdown mode starts when fuel gas to the heater burners is stopped and ends when heater stack oxygen level reaches 18 percent, or greater, as measured by the Continuous Emission Monitoring System (CEMS).

A. NO_x:

1. NO_x emissions resulting from each coker heater unit must not exceed the following limits:
 - a. Concentration based limits for normal operation in forced draft mode based on a 30-day rolling average (includes startup/shutdown emissions): 6.0×10^{-1} parts per million volume dry (ppmvd) at zero percent oxygen.
 - b. Mass emission rate limit for normal operation in forced draft mode: 18.2 lb/hr on a calendar day average (includes startup/shutdown emissions).
 - c. Concentration based limits for normal operation in natural draft mode based on a 30-day rolling average (includes startup/shutdown emissions): 4.0×10^{-1} ppmvd at 0 percent oxygen. This limit shall apply at and after 30 consecutive days of heater operation in natural draft mode. For periods of continuous normal heater operation in natural draft mode less than 30 days in duration, the limit in Condition V.A.1.a must apply.
 - d. Mass emission rate limit for normal operation in natural draft mode: 12.1 lb/hr on a calendar day average (includes startup/shutdown emissions).
 - e. Mass emission rate limit for standby mode: 8.0 lb/hr per heater on a rolling 24-hour average.

B. CO:

1. CO emissions resulting from each coker heater unit must not exceed the following limits:
 - a. Concentration based limits for normal operation in forced and natural draft mode (excluding standby, startup, and shutdown): 33 ppmvd at zero percent oxygen on a 30-day rolling average.
 - b. Mass emission rate limit for normal operation in forced and natural draft mode: 6.1 lb/hr based on a calendar day average.

- c. Mass emission rate limit for startup/shutdown modes: 75.0 lb/hr hourly average.
- d. Mass emission rate limit for standby mode: 75.0 lb/hr on a rolling 24-hour average.

C. SO₂:

- 1. SO₂ emissions resulting from both coker heater units must not exceed the following limits.
 - a. Mass emission rate limit of 37 lb/hr on a calendar day average (includes startup/shutdown emissions) for both heaters combined.
 - b. Mass emission rate limit of 132 tons per year for both heaters combined, on a 12-month rolling total.

D. Particulate Matter (Filterable)

- 1. PM (filterable) from each coker heater unit must not exceed the following limit:
 - a. Concentration based limit of 0.0025 lb/MMBtu on an hourly average or as needed, consistent with test method.

E. PM₁₀ and PM_{2.5} (Filterable and condensable combined)

- 1. PM₁₀ and PM_{2.5} (including filterable and condensable combined particulate) from each new coker heater unit must not exceed the following limit:
 - a. Concentration based limit of 0.010 lb/MMBtu on an hourly average or as needed, consistent with test method.

F. VOC

- 1. VOCs from each coker heater unit must not exceed the following limit:
 - a. Concentration limit of 0.0054 lb/MMBtu on an hourly average or as needed, consistent with test method.

G. H₂SO₄

- 1. H₂SO₄ from each coker heater unit must not exceed the following limits:

- a. Concentration based limit of 0.0053 lb/MMBtu on an hourly average or as needed, consistent with test method.

H. CO_{2e}

1. CO_{2e} from each new coker heater unit must not exceed the following limits:

- a. Mass emission rate limit of 36,631 lb/hr on a calendar year average.

VI. BACT DETERMINATIONS

Consistent with 40 CFR § 52.21(j)(3), which requires that BACT be applied to each PSD pollutant with significant net emissions increases, the BACT determinations of this section apply to this project. Facility units not listed in this section, do not require a BACT analysis because they are not physically or operationally modified as a result of this project.

A. BACT for Coker Heaters:

Table VI-1. BACT Determinations for Coker Heaters	
Pollutant	BACT Determination Description
NO _x	Ultra low NO _x Burners (ULNB) and Good Combustion Practices. These BACT determinations shall be demonstrated by compliance with the NO _x BACT limits of Section V.
CO	Good Combustion Practices, demonstrated by compliance with CO BACT limits of Section V.
SO ₂	Good Combustion Practices, use of coker off gas, and fuel limits for hydrogen sulfide (H ₂ S). These BACT determinations shall be, demonstrated by compliance with the SO ₂ BACT limits of Section V.
PM (filterable)	Good Combustion Practices and use of low sulfur fuels (see SO ₂ BACT determination). These BACT determinations shall be, demonstrated by compliance with the PM BACT limits of Section V.
PM ₁₀ (filterable and condensable)	Good Combustion Practices and use of low sulfur fuels (see SO ₂ BACT determination). These BACT determinations shall be demonstrated by compliance with the PM ₁₀ BACT limits of Section V.
PM _{2.5} (filterable and condensable)	Good Combustion Practices and use of low sulfur fuels (see SO ₂ BACT determination). These BACT determinations shall be, demonstrated by compliance with the PM _{2.5} BACT limits of Section V.
VOC	Good Combustion Practices demonstrated by compliance with the VOC BACT limits of Section V.
H ₂ SO ₄	Good Combustion Practices, use of coker off gas, and fuel limits for hydrogen sulfide (H ₂ S). These BACT determinations shall be demonstrated by compliance with the H ₂ SO ₄ BACT limits of Section V.
CO _{2e}	Good Combustion Practices, use of low-carbon fuels such as coker off gas and/or refinery fuel gas (RFG), and energy efficient design. These BACT determinations shall be, demonstrated by compliance with the CO _{2e} BACT limits of Section V.

- B. BACT for Components of Coker Heaters, Lean Oil Absorption, and Heat Exchangers:

Table VI-2. BACT Determinations for Components of Coker Heaters, Lean Oil Absorption, Cooling Box, and Heat Exchangers	
Pollutant	BACT Determination Description
VOC	Implementation of Leak Detection and Repair (LDAR) program consistent with 40 CFR 60 Subpart GGGa and Subpart VVa (including recordkeeping requirements contained within each regulation).
CO _{2e}	Implementation of Leak Detection and Repair (LDAR) program consistent with 40 CFR 60 Subpart GGGa and Subpart VVa (including recordkeeping requirements contained within each regulation).

VII. SPECIFIC OPERATING REQUIREMENTS

The following requirements are listed as statements of fact because they are relevant to this permit. Ecology is not making them enforceable as part of this permit because they are already enforceable independent of this permit.

- A. The coker heaters must comply with all applicable requirements of New Source Performance Standards (NSPS), 40 CFR Part 60.1-60.19 (Subpart A).
- B. The coker heaters must comply with all applicable NSPS requirements of 40 CFR Part 60.100a-60.109a (Subpart Ja), including but not limited to the emission limits in Table VI-1.
- C. The lean oil absorption system must comply with all applicable NSPS requirements of 40 CFR Part 60.1-60.19 (Subpart A).
- D. The lean oil absorption system must comply with all applicable NSPS requirements of 40 CFR Part 60.660-668 (Subpart NNN).
- E. New components of this project in organic HAP service, must comply with all applicable requirements of National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR Part 63, (Subpart CC).
- F. The coker unit must comply with all applicable updated NESHAP requirements of 40 CFR Part 63, (Subparts CC and UUU).
- G. The coker heaters must comply with all applicable NESHAP requirements of 40 CFR Part 63, (Subpart DDDDD).

VIII. COMPLIANCE MONITORING REQUIREMENTS

BP must complete the required compliance test and certification for the following continuous emission monitoring system (CEMS) within 60 days of achieving the maximum firing rate at the coker heaters, but not later than 180 days after initial start-up. All testing (both initial and follow-up) must be conducted while heaters are fired at least 90 percent of the normal maximum operating rate (MMBtu/hr). Normal maximum operating rate is defined as the 90th percentile of the average hourly operating rates during the previous 12-month period. Retesting would be required within 60 days if the heater firing rate, based on a six (6) month average, is above 110 percent of the average firing measured during the most recent source test.

- A. BP must demonstrate compliance for NO_x in Conditions V.A.1. with a CEMS that monitors NO_x and O₂ operated in accordance with 40 CFR 60 Appendix B and F, and NWCAA 367 and Appendix A. Stack flows for calculating NO_x mass emissions must be determined in accordance with Condition VIII.H.
- B. BP must demonstrate compliance for CO in Conditions V.B.1 with a CEMS that monitors CO and O₂ operated in accordance with 40 CFR 60 Appendix B and F, and NWCAA 367 and Appendix A. Stack flows for calculating NO_x mass emissions must be determined in accordance with Condition VIII.H.
- C. BP must demonstrate compliance for SO₂ in Conditions V.C1. with a CEMS that monitors SO₂ and O₂, operated in accordance with 40 CFR 60 Appendix B and F, and NWCAA 367 and Appendix A. Stack flows for calculating SO₂ mass emissions must be determined in accordance with Condition VIII.H.
- D. BP must demonstrate compliance for particulate matter in Conditions V.D.1 and V.E.1 as stated in subsection i below:
 - i. BP must conduct source testing using EPA Method 5 or 201A (for filterable particulate matter) and Method 202 (for condensable particulate), or other method pre-approved by the NWCAA. BP must conduct an initial stack test no more than 180 days after startup. Thereafter, conduct testing within 13 months of the most recent test. After three consecutive tests on each coker heater that have demonstrated emissions are less than emissions limits in Condition V.D.1 and V.E.1, testing of each coker heater may be reduced to once every five years for that pollutant. If a test demonstrates emissions are greater than the emission limits in Conditions V.D.A and V.E.1, annual testing for that pollutant is required until three consecutive tests demonstrate compliance.
- E. BP must demonstrate compliance for VOC in Conditions V.F.1 as stated in subsection i below:

- i. BP must conduct source testing using EPA Method 25A, or other method pre-approved by the NWCAA, in coordination with NWCAA. BP must conduct an initial source test no more than 180 days after startup. Thereafter, demonstrate compliance within 20 calendar quarters of the most recent test.
- F. BP must demonstrate compliance for H₂SO₄ in Conditions V.G.1. as stated in subsection i below:
 - i. BP must conduct source stack testing using EPA Method 8, or other method pre-approved by the NWCAA, in coordination with NWCAA. BP must conduct an initial source test no more than 180 days after startup. Thereafter, demonstrate compliance by conducting testing using EPA Method 8, or other method preapproved by the NWCAA, within 20 calendar quarters of the most recent test.
- G. BP must demonstrate compliance for CO_{2e} in Conditions V.H.1., with fuel tracking and 40 CFR Part 98 (Subpart C).
- H. Coker off gas combusted in the coker heaters must be sampled and analyzed on a weekly basis for composition using Universal Oil Products (UOP) Laboratory Test Method 539-97 “Gas Analysis by Gas Chromatography” or equivalent. The gas composition must be used to determine the heat content of the gas in terms of British thermal unit, high heat value, per standard cubic foot (Btu/scf) and to determine the EPA Method 19 Fd factor for the gas. An alternative method to EPA Method 19 can be used to determine the Fd factor if pre-approved by NWCAA.

IX. RECORDKEEPING AND REPORTING REQUIREMENTS

- A. Beginning the first calendar month after source testing and CEMS certification have been reported to NWCAA and Ecology, BP must keep the following records at the site (or electronically accessible at the site):
 - 1. The calculations and results pursuant to Condition VIII (A through H).
 - 2. The data used to determine compliance with the Condition V (A through C) with the appropriate averaging time of the emission limit.
- B. Records must be retained for not less than five (5) years after their origination.
 - 1. At a minimum, the most recent two (2) years of data must be retained onsite (or be electronically accessible at the site). The remaining three (3) years of data may be retained off-site.

2. Records must be available for inspection by Ecology and NWCAA within ten (10) days of request.
- C. By April 15 of each year, beginning with the year following the startup of the two new coker heaters authorized by this permit, BP must report in writing or electronic mail, postmarked or received by April 15 of each year, the following information to Ecology and/or NWCAA. This report can be integrated with the state annual emissions inventory report.
1. Annual Emission and emission rates of the pollutants in Condition V
- D. BP must furnish Ecology and/or NWCAA, within 60 days of completion, a report of the results of any performance evaluation in Conditions VIII.A-G.

X. GENERAL RESTRICTIONS ON FACILITY OPERATIONS

- A. At all times, BP must, to the extent practicable, maintain and operate the equipment listed in Table IV-1 of this permit, including any associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions.
- B. Determination of whether acceptable operating and maintenance procedures are being used for the equipment listed in Table IV-1 of this permit will be based on information available to Ecology, NWCAA, EPA and/or their authorized representatives, which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

XI. MALFUNCTION AND EXCESS EMISSIONS REPORTING

- A. Prior to incorporation of the conditions of this PSD permit into BP's Title V Air Operating Permit issued pursuant to 40 CFR Part 70 and WAC 173-401, BP must report to Ecology and NWCAA, in writing or electronic mail, following the discovery of any malfunction of air pollution control equipment, process equipment, or of a process, which results in an increase in emissions above the allowable emission limits of this permit, in accordance with WAC 173-400-107 and the following conditions:
1. BP must notify Ecology and NWCAA, in writing or electronic mail, postmarked or received no later than thirty (30) days after the end of the month in which a malfunction is discovered, for any malfunction of air pollution control equipment, process equipment, or of a process, which results in an increase in emissions above the allowable emission limits of this permit. This notification must include a description of the malfunctioning equipment, process equipment or process, the date and time of the initial malfunction (if

known), the period of time over which emissions were increased due to the malfunction, the cause of the malfunction (if known), the estimated resultant excess emissions, and the methods utilized to mitigate emissions and restore normal operations.

2. For purposes of this permit, “malfunction” means any failure of air pollution control equipment, process equipment, or of a process to operate in a normal manner.
- B. After the conditions of this PSD permit have been incorporated into BP’s Title V Air Operating Permit issued pursuant to 40 CFR Part 70 and WAC 173-401, BP shall report to NWCAA the discovery of any malfunction of air pollution control equipment, process equipment, or of a process, which results in an increase in emissions above the allowable emission limits specified in this permit, pursuant to the deviation reporting requirements and, if applicable, pursuant to the unavoidable excess emissions reporting requirements of that Title V Air Operating Permit.
 - C. Compliance with the malfunction notification requirements, as applicable, will not excuse or otherwise constitute a defense to any violation of this PSD permit or any law or regulation such malfunction may cause.

XII. RIGHT OF ENTRY

Section 114 of the federal Clean Air Act, 42 U.S.C. § 7414, and the Revised Code of Washington (RCW) 70.94.200, and WAC 173-400-105(3) provide authorized representatives of EPA, Ecology, and NWCAA certain rights to enter and inspect the source. Refusal by BP to allow such entry and inspection may be a violation of the federal Clean Air Act and/or the RCW subject to penalty as provided in those statutes. Pursuant to these statutes, authorized representatives of EPA, Ecology, and NWCAA, upon the presentation of credentials:

- A. Have a right of entry to, upon, or through any premises of BP or any premises in which any records this permit requires BP to maintain are located.
- B. Have the right, at reasonable times, to access and copy any records this permit requires BP to maintain.
- C. Have the right, at reasonable times, to inspect any monitoring equipment or method required by this permit.
- D. Have the right, at reasonable times, to sample any emissions that BP is required to sample under this permit.

XIII. TRANSFER OF OWNERSHIP

- A. In the event of any changes in control or ownership of facilities to be constructed, this PSD permit will be binding on all subsequent owners and operators. The applicant must notify the succeeding owner and operator of the existence of this PSD permit and its conditions by letter, a copy of which must be forwarded to Ecology and/or NWCAA as specified in Condition III.A.
- B. If the conditions of this PSD permit have been incorporated into BP's Title V Air Operating Permit issued pursuant to 40 CFR Part 70 and WAC 173-401, then the provisions for amending that Title V Air Operating Permit to allow for a change in ownership or operational control shall apply in place of the notification provisions in Condition XIII.A.

XIV. ADHERENCE TO APPLICATION AND COMPLIANCE WITH OTHER ENVIRONMENTAL LAWS

- A. Pursuant to 40 CFR § 52.21(r) (1) as adopted in WAC 173-400-720(4)(vi), BP must install and operate the proposed emissions units in accordance with this PSD permit and the application on which this permit is based.
- B. Pursuant to 40 CFR § 52.21(r)(3), as adopted in WAC 173-400-720(4)(vi) this PSD permit shall not relieve BP of the responsibility to comply fully with applicable provisions of the State Implementation Plan and any other requirements under local, state, or federal law.
- C. Any applicant who fails to submit any relevant facts or who has submitted materially incorrect relevant information in a permit application must, upon becoming aware of such failure, or incorrect submittal, promptly submit such supplementary facts or corrected information.
- D. To the extent provided by 40 CFR § 52.21(c), as adopted in WAC 173-400-720(4)(vi) for the purpose of establishing whether or not BP has violated or is in violation of any requirement of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether BP would have been in compliance with applicable requirements if the appropriate performance or reference test or procedure had been performed.

XV. APPEAL PROCEDURES

This PSD permit, or any conditions contained in it, may be appealed to:

- A. The Pollution Control Hearings Board (PCHB) as provided in Chapter 43.21B RCW and Chapter 371-08 WAC.

ACRONYMS AND ABBREVIATIONS

°C	degrees Celsius
°F	degrees Fahrenheit
ASTM	American Society for Testing and Materials
BACT	Best Available Control Technology
CFR	Code of Federal Regulations
CEMS	Continuous Emissions Monitoring System
CO	carbon monoxide
CO ₂ e	carbon dioxide equivalents
Ecology	Washington State Department of Ecology
EPA	United States Environmental Protection Agency
FTIR	Fourier Transform Infrared (FT-IR) spectrometer
GC	Gas Chromatography
gal	gallon(s)
GHG	greenhouse gases
H ₂ SO ₄	sulfuric acid mist
HVLP	High Volume Low Pressure
kW	kilowatt
lb	pound(s)
lb/hr	pound(s) per hour
mm Hg	millimeters of mercury column
MMBtu/hr	million British thermal units per hour
MSDS	Material Safety Data Sheet
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO _x	nitrogen oxides
NWCAA	Northwest Clean Air Agency
O ₂	oxygen
PCHB	Pollution Control Hearings Board
PM	particulate matter
PM ₁₀	particulate matter less than 10 micrometers in diameter
PM _{2.5}	particulate matter less than 2.5 micrometers in diameter

ppm	parts per million
ppmv	parts per million by volume
ppmvd	parts per million by volume on a dry basis
PSD	Prevention of Significant Deterioration of Air Quality
RCW	Revised Code of Washington
scf	standard cubic feet
SCR	selective catalytic reduction
SO ₂	sulfur dioxide
tpy	tons per year
ULSD	ultra-low sulfur diesel
U.S.C.	United States Code
VOC	volatile organic compounds
WAC	Washington Administrative Code